

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (currently amended) An apparatus, comprising:

a tunable laser cavity, ~~wherein said~~ and disposed within the laser cavity ~~comprises~~ are at least three mirrors, at least one filter and a plurality of crystals, ~~wherein said~~

the at least three mirrors are ~~substantially~~ arranged in a folded linear cavity lambda configuration, ~~said~~

the at least one filter comprises a birefringent filter and an etalon,

at least one of said plurality of crystals comprises a Colquiriite crystal, and at least one of said plurality of crystals comprises a nonlinear crystal, ~~wherein said~~

the at least three mirrors, ~~thesaid~~ at least one filter, and ~~thesaid~~ plurality of crystals ~~are configured for providing~~ provide single frequency electromagnetic radiation ~~of an approximately single frequency~~; and

at least one electromagnetic radiation source being coupled to the laser cavity, wherein said at least one electromagnetic radiation source is ~~capable of providing~~ provides electromagnetic radiation having ~~an approximately particular a single~~ wavelength to said laser cavity, wherein at least one of ~~thesaid~~ plurality of crystals is ~~configured to~~, in operation, ~~alter~~ alters one or more properties of ~~thesaid~~ electromagnetic radiation provided by ~~thesaid~~ electromagnetic radiation source,

wherein ~~thesaid~~ at least one filter is ~~configured to filter~~ filters at least a portion of the electromagnetic radiation altered by at least one of ~~thesaid~~ plurality of crystals, wherein the at least one filter is adjustable to tune the frequency of the electromagnetic radiation altered by the at least one of ~~thesaid~~ plurality of crystals.

Claim 2. (original) The apparatus of claim 1, wherein said at least one electromagnetic radiation source comprises a laser diode.

Claim 3. (original) The apparatus of claim 1, wherein said apparatus is capable of providing electromagnetic radiation within approximately the blue region of the electromagnetic spectrum.

Claim 4. (original) The apparatus of claim 1, wherein at least one of said plurality of crystals is configured to, in operation, alter one or more properties of said electromagnetic radiation provided by said laser diode.

Claim 5. (original) The apparatus of claim 4, wherein at least one of said one or more properties comprises electromagnetic radiation wavelength.

Claim 6. (original) The apparatus of claim 1, wherein said nonlinear crystal is configured to convert at least a portion of said electromagnetic radiation of an approximately particular wavelength to radiation having approximately half said approximately particular wavelength.

Claim 7. (canceled).

Claim 8. (original) The apparatus of claim 1, wherein said at least one of said plurality of crystals comprising a Colquiriite crystal is capable of altering electromagnetic radiation so as to produce electromagnetic at least approximately within a wavelength range of approximately 750 nanometers to approximately 850 nanometers, and wherein said at least one of said plurality of crystals comprising a nonlinear crystal comprises a lithium triborate crystal capable of altering electromagnetic radiation so as to produce electromagnetic radiation approximately within the range of approximately 375

nanometers to approximately 425 nanometers.

Claim 9. (original) The apparatus of claim 2, wherein said laser diode is capable of producing electromagnetic radiation with a wavelength of approximately 670 nanometers.

Claim 10. (original) The apparatus of claim 1, wherein at least one of said plurality of mirrors comprises a dielectric mirror, wherein said dielectric mirror has at least approximately a particular reflectivity.

Claim 11. (original) The apparatus of claim 1, wherein at least one filter comprises a quartz birefringent filter.

Claim 12. (Currently amended) ~~The apparatus of claim 11,~~ An apparatus,
comprising:
a tunable laser cavity, wherein said laser cavity comprises at least three mirrors, at
least one filter and a plurality of crystals, wherein
said at least three mirrors are substantially arranged in a folded linear
cavity lambda configuration,
said at least one filter comprises a birefringent filter and an etalon, at least
one of said plurality of crystals comprises a Colquiriite crystal, and at least one
of said plurality of crystals comprises a nonlinear crystal, wherein
said at least three mirrors, said at least one filter, and said plurality of
crystals are configured for providing electromagnetic radiation of an
approximately single frequency; and
at least one electromagnetic radiation source being coupled to the laser cavity,
wherein said at least one electromagnetic radiation source is capable of providing
electromagnetic radiation having an approximately particular wavelength to said laser
cavity, wherein at least one of said plurality of crystals is configured to, in operation, alter

one or more properties of said electromagnetic radiation provided by said electromagnetic radiation source,

wherein said at least one filter is configured to filter at least a portion of the electromagnetic radiation altered by at least one of said plurality of crystals, wherein the at least one filter is adjustable to tune the frequency of the electromagnetic radiation altered by the at least one of said plurality of crystals,

wherein at least one filter comprises a quartz birefringent filter,

wherein said quartz birefringent filter further comprises three plates of quartz birefringent.

Claim 13. (original) The apparatus of claim 12, wherein said quartz birefringent filter is capable of being adjusted by altering the orientation of one or more plates.

Claim 14. (original) The apparatus of claim 11, wherein said filter is capable of being adjusted such that the wavelength of electromagnetic radiation substantially passing through the filter is altered by at least approximately fractions of a nanometer.

Claim 15. (previously presented) The apparatus of claim 1, wherein said apparatus is incorporated within a holographic data recording system, said holographic data recording system further comprising one or more photosensitive recording mediums, said laser source being configured to, in operation:

provide one or more laser beams to said photosensitive recording medium; and
form an image in said photosensitive recording medium.

Claims 16-22. (cancelled)

Claim 23. (currently amended) A tunable laser system, comprising:

a laser source;

two or more crystals, wherein one crystal comprises a laser crystal, and one

crystal comprises a nonlinear crystal;

at least three mirrors, ~~substantially~~ arranged in a folded linear cavity lambda configuration; and

one or more filters,

said laser source, ~~thesaid~~ one or more crystals, ~~thesaid~~ at least three mirrors and ~~thesaid~~ one or more filters being configured such that ~~thesaid~~ laser source is ~~capable of~~ can produce ~~producing~~ electromagnetic radiation within a particular single wavelength moderange, at least one of ~~thesaid~~ two or more crystals being configured to alter one or more properties of ~~thesaid~~ electromagnetic radiation, and at least one of ~~thesaid~~ one or more filters being configured to filter at least a portion of the electromagnetic radiation altered by ~~thesaid~~ two or more crystals, wherein the portion filtered is adjustable to tune the frequency of the electromagnetic radiation altered by ~~thesaid~~ two or more crystals.

Claim 24. (original) The laser system of claim 23, wherein at least two of said two or more crystals comprise at least a Colquiriite crystal and a lithium triborate crystal, said Colquiriite crystal being capable of absorbing electromagnetic radiation so as to produce electromagnetic radiation within a wavelength range of approximately 750 nanometers to 850 nanometers, and said lithium triborate crystal being capable of altering electromagnetic radiation so as to produce electromagnetic radiation approximately within the range of approximately 375 nanometers to 425 nanometers.

Claim 25. (original) The laser system of claim 24, wherein said laser system is capable of producing electromagnetic radiation within approximately the blue region of the electromagnetic spectrum.

Claim 26. (currently amended) A tunable laser system, comprising:

a laser source;

two or more crystals, wherein one crystal comprises a laser crystal, and one crystal comprises a nonlinear crystal;

at least three mirrors, substantially arranged in a folded linear cavity lambda configuration; and

one or more filters,

said laser source, said one or more crystals, said at least three mirrors and said one or more filters being configured such that said laser source is capable of producing electromagnetic radiation within a particular range, at least one of said two or more crystals being configured to alter one or more properties of said electromagnetic radiation, and at least one of said one or more filters being configured to filter at least a portion of the electromagnetic radiation altered by said two or more crystals, wherein the portion filtered is adjustable to tune the frequency of the electromagnetic radiation altered by said two or more crystals;

The laser system of claim 23, wherein at least two of said two or more crystals comprise at least a Colquiriite crystal and a lithium triborate crystal, said Colquiriite crystal being capable of absorbing electromagnetic radiation so as to produce electromagnetic radiation within a wavelength range of approximately 750 nanometers to 850 nanometers, and said lithium triborate crystal being capable of altering electromagnetic radiation so as to produce electromagnetic radiation approximately within the range of approximately 375 nanometers to 425 nanometers; and

The laser system of claim 24, wherein said at least one of said one or more filters comprising three plates of quartz birefringent, wherein said quartz birefringent plates are capable of being adjusted by altering the orientation of one or more plates.

Claim 27. (original) The laser system of claim 26, wherein said filter is capable of being adjusted such that the wavelength of electromagnetic radiation substantially passing through the filter is altered by approximately fractions of a nanometer.

Claim 28. (original) The laser system of claim 24, wherein said laser system is incorporated within a holographic data recording system, said holographic data recording system further comprising one or more photosensitive recoding mediums, said laser

system being configured to, in operation:

provide electromagnetic radiation to said photosensitive recording medium; and
form an image in said photosensitive recording medium.

Claims 29-30. (canceled)